DATSIZE - Minimum Size of Buffer for Local Data

This Natural profile parameter is for mainframes only.

With this parameter you can set the minimum size of the local data buffer (DATSIZE).

Alternatively, you can use the equivalent Natural profile parameter DS or macro NTDS (see Using Optional Macros in a Natural Parameter Module in the Natural Operations for Mainframes documentation) to specify the buffer size.

Possible settings	10 - 1024	Minimum buffer size in KB.
Default setting	32	
Dynamic specification	YES	
Specification within session	NO	

The DATSIZE buffer is a "variable size" buffer. If more storage for local data areas is required during the session, the DATSIZE buffer is expanded dynamically. In a thread environment, the DATSIZE may be temporarily allocated outside the storage thread if it becomes too large. The size of the DATSIZE buffer is reduced back to the minimum size when the application does not need the space any longer.

Function of the DATSIZE Buffer

At execution time, the DATSIZE buffer holds the local data used by the Natural main program being executed and the local data of all subordinate objects (except FETCHed programs) invoked by this program.

When you use Natural in a development environment, the minimum DATSIZE required is the default setting (that is, 32 KB). A smaller DATSIZE is only possible when using Natural as a runtime-only environment without any Natural utilities being available.

**Calculating the DATSIZE Requirement**

The actual DATSIZE requirement can be calculated as follows (refer to the illustration below):

If another object is invoked by the main program, the local data of this object are also held in the DATSIZE buffer.

If other objects are invoked from the invoked object (with a CALLNAT, PERFORM, FETCH RETURN, INPUT USING MAP statement, a helproutine/helpmap being invoked), their local data are also held in the DATSIZE buffer; the local data of an invoked object is held in the DATSIZE buffer until control is returned from the invoked object to the invoking object.

If another main program is invoked with a FETCH statement, the local data of all previously invoked objects are deleted from the DATSIZE buffer and the local data of the FETCHed program are held in the DATSIZE.

In addition, an amount of approximately 128 bytes of general control information for execution are held in the DATSIZE buffer, plus approximately 128 bytes of control information for each object whose local data are being held in the DATSIZE buffer. This is illustrated in the figure below.
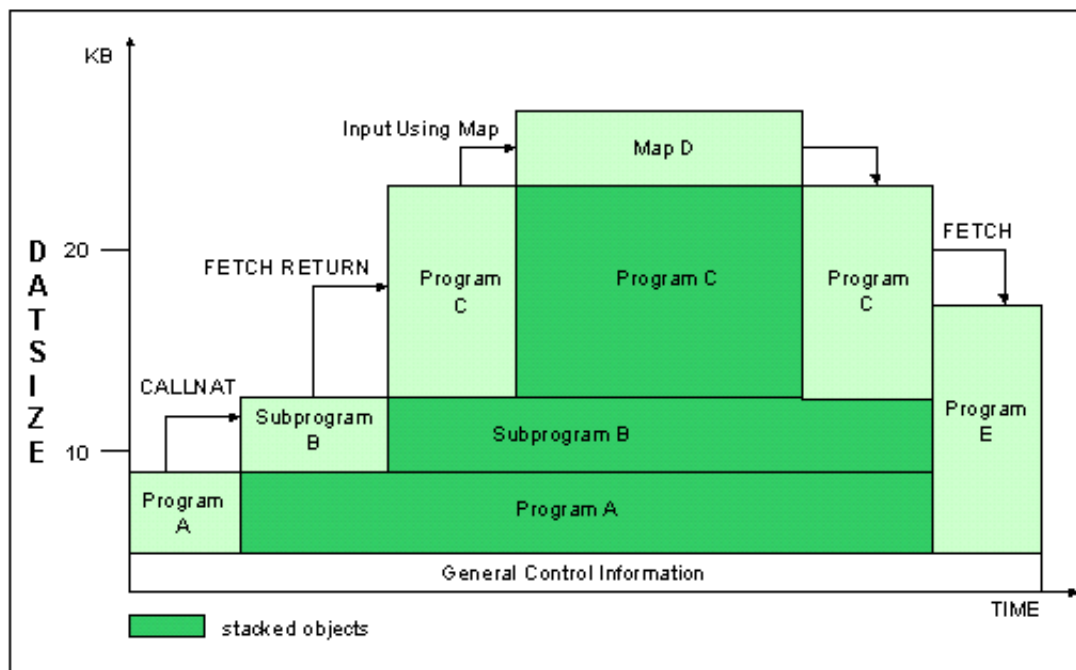
The **system command** LIST provides an option to display directory information about an object. This information includes the object's DATSIZE storage requirement (not including the control information).